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Working Paper 12/01

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NOTICE

FINANCIAL LITERACY AND CONSUMER CREDIT USE

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Abstract

We survey a representative sample of UK consumers on their understanding of core ‘financial literacy’ concepts in consumer credit. We find levels of financial literacy are generally low in the population. We also find levels of financial literacy are on average actually lower among those who participate in consumer credit markets compared with those who do not. This evidence contrasts with that from previous studies on retirement planning and stock market investment which find a positive relationship between financial literacy and market participation.

Total words: 1964

Keywords: financial literacy, consumer credit

JEL Codes: D12 D14 E21

Introduction

A new literature on consumer financial literacy examines the relationship between individuals' understanding of core financial concepts and their participation and behaviour in financial markets. Understanding of basic financial concepts such as interest compounding and real versus nominal returns in the population as a whole is generally low (Lusardi, 2008; Jappelli, 2010). However, among those who participate in financial markets financial literacy is typically better. Studies have documented that individuals who undertake their own private retirement saving and who participate in the stock market are better informed about core financial concepts relevant to those markets (Lusardi and Mitchell, 2007; van Rooji et al., 2011a, 2011b; Yoong, 2011). However, the decision to invest in financial literacy arises endogenously with the financial needs of an individual (Jappelli and Padula, 2011). Studies have therefore established the strength of causal links between financial literacy and market participation and performance by exploiting exogenous sources of acquiring financial literacy, such as mandatory financial education when young (Lusardi and Mitchell, 2007).

We examine the relationship between consumer financial literacy and participation in consumer credit markets. We present survey evidence from a representative sample of UK consumers using financial literacy survey questions focused on core concepts relevant to consumer credit use. In keeping with the existing literature on financial literacy and saving behaviour, we find levels of financial literacy relating to consumer debt are generally low in the population. However, in contrast with the existing literature, we find levels of consumer financial literacy are on average actually significantly *lower* among those who participate in consumer credit markets compared with those who do not. Moreover, deeper participation in the consumer credit market is associated with worse financial literacy.

Data and Results

We commissioned the market research company YouGov to survey a representative sample of 3041 UK residents on a broad range of financial, socio-economic, labour market and demographic topics, incorporating our financial literacy survey questions into the survey design. The survey was conducted via the internet. We included the following three multiple-choice questions, comparable to those in the existing literature using by Lusardi and Tufano (2009), on the financial concepts of interest rate calculation, loan interest compounding and minimum balance payments. These three concepts are essential for understanding the cost of consumer credit products. The three questions and multiple-choice answers were:

Simple interest question

“Cheryl owes £1000 on her bank overdraft and the interest rate she is charged is 15% per year. If she didn’t pay anything off, at this interest rate, how much money would she owe on her overdraft after 1 year?” £850 / £1000 / £1150 / £1500 / Do not know.

Interest compounding question

“Sarah owes £1000 on her credit card and the interest rate she is charged is 20% per year compounded annually. If she didn’t pay anything off, at this interest rate, how many years would it take for the amount she owes to double?” Less than 5 years / Between 5 and 10 years / More than 10 years / Do not know.

Minimum payments question

“David has a credit card debt of £3000 at an Annual Percentage Rate of 12% (or 1% per month). He makes payments of £30 per month and does not gain any charges or additional spending on the card. How long will it take him to pay off this debt?” Less than 5 years / Between 5 and 10 years / More than 10 years / None of the above, he will continue to be in debt / Do not know.

In the whole sample only 34% of respondents answered all questions correctly. 12% of respondents answered all questions incorrectly. The proportion of respondents answering correctly for each question was: 84% for question one, 55% for question two and 45% for question three. The proportion of respondents who chose the ‘don’t know’ option for each question was: 7% for question one, 14% for question two and 20% for question three. Hence for each question more respondents chose an incorrect answer than simply stated ‘do not know’. The demographic pattern in correct responses was similar to that found in other studies: male respondents on average answered more questions correctly compared with female respondents, more educated respondents on average answered more questions correctly compared with less educated, and both younger and older respondents answered fewer questions correctly compared with middle-aged respondents.

For each question the proportion of individuals answering correctly was higher among those without any net outstanding balance on any consumer credit products compared to those with outstanding balances (where consumer credit products are defined as: credit cards, store cards, personal loans, bank overdrafts, hire purchase loans, mail order catalogue credit, pay-day loans and hire purchase (rent to own) loans). Table 1 provides a breakdown of correct response rates by question plus other summary statistics. For the second and third questions, on average the correct response rate among those borrowing on consumer credit was ten percentage points lower than among those who do not borrow on consumer credit. However, there are also differences between these groups in demographic characteristics, labour market status, education and income.

Table 2 presents results from a series of Probit models (a full list of covariates is provided in the notes accompanying the Table) for each question asked in which the dependent variable is in each case a 1/0 indicator dummy, with a value of 1 denoting whether the individual answered the question correctly. Two Probit specifications are shown for each

question: firstly, a specification in which individuals who borrow on consumer credit are identified by a single 1/0 dummy and, secondly, a specification in which a series of 1/0 dummy variables are included which categorise individuals who borrow on consumer credit into quintiles of the distribution of the debt to income ratio (where an individual's debt to income ratio is calculated by dividing the total value of net outstanding borrowing on all consumer credit items by gross annual income). The first (top) quintile of the debt-to-income distribution has an upper bound of 0.86 and a lower bound of 0.49. The fifth (bottom) quintile has an upper bound of 0.12 and a lower bound of 0.04.

Results indicate that, for each question, borrowing on consumer credit is associated with a statistically significant lower likelihood of answering correctly. The marginal effects differ in magnitude across specifications. In the case of the simple interest model, the marginal effect of 0.02 is very small against the baseline predicted probability of 0.86. However, for the compound interest question the marginal effect of 0.07 against the baseline probability of 0.56 implies individuals borrowing on credit are 13% less likely to answer this question correctly. In the case of the minimum payments question this magnitude increases to 23%. Results from the specifications incorporating the debt to income quintile indicator variables show individuals with higher levels of consumer credit borrowing relative to their income (in the first, second and third quintiles of the debt to income distribution) are much less likely to answer each of the questions correctly, though low levels of consumer credit relative to income are not associated with lower likelihood of answering a question correctly. For the highest debt group in the first quintile of the distribution the likelihood of answering the minimum payments question correctly is approximately one half that of an individual without any consumer credit borrowing.

Conclusion

The literature on financial literacy and individual financial decisions recognises that individuals choose to acquire financial literacy depending upon the financial choices they might need to undertake. However, we show, in contrast, that individuals who borrow on consumer credit, and who borrow more relative to their income, are actually less likely to answer correctly survey questions about core concepts relating to consumer credit products correctly compared with those who do not.

Credit use among rational households is most commonly modelled as being driven by life-cycle characteristics, most obviously age and income. However, our analysis shows that consumer credit use is associated with less understanding of consumer credit. This raises an interesting new result on the role of ignorance in determining participation in the consumer credit market.

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Table 1
Summary Statistics

	Does not borrow on consumer credit	Borrows on consumer credit
n in sample	2117	924
% in sample	70%	30%
<i>% answering correctly</i>		
simple interest question	87%	83%
interest compounding question	61%	50%
minimum payments question	48%	41%
<i>additional summary statistics</i>		
age	48.1	43.2
male	53%	45%
married	65%	67%
divorced	7%	7%
employed	53%	66%
retired	25%	7%
spouse employed	37%	48%
spouse retired	17%	6%
age left full-time education	18.2	18.6
home owner	76%	54%
renter	24%	46%
annual household income	£36,000	£35,000

Notes: an individual is categorised as borrowing on consumer credit if they hold a positive balance on at least one consumer credit loan, or a revolving balance on at least one credit / store card, net of liquid deposits held by the individual (a balance which could not be cleared before the period in which interest and charges are due).

Table 2 Probit Model Estimates						
	simple interest		interest compounding		minimum payment	
	1.	2.	3.	4.	5.	6.
consumer credit = 1	-0.02* (0.01)	-	-0.07** (0.02)	-	-0.10** (0.02)	-
<i>Quintile of debt/income distribution</i>						
1 st quintile	-	-0.06** (0.01)	-	-0.14** (0.04)	-	-0.21** (0.04)
2 nd quintile	-	-0.05** (0.01)	-	-0.10** (0.03)	-	-0.14** (0.03)
3 rd quintile	-	-0.02* (0.01)	-	-0.03** (0.01)	-	-0.04** (0.02)
4 th quintile	-	-0.01 (0.01)	-	-0.02* (0.01)	-	-0.01 (0.01)
5 th quintile	-	-0.01 (0.01)	-	-0.01 (0.01)	-	-0.01 (0.01)
N	3041	3041	3041	3041	3041	3041
baseline probability	0.86	0.86	0.56	0.56	0.44	0.44

*Notes: * denotes statistical significance at 5% level, ** denotes statistical significance at 1% level. Additional control variables included in all specification are: age (1/0 dummy variables for 10 year age bracket), 1/0 dummy variables to denote male, married, non-married couple, divorced (omitted group: single), employed, retired, unemployment (omitted group: disabled out of the labour force), spouse employed, spouse unemployed, spouse retired (omitted group: spouse disabled or out of the labour force), homeowner (omitted group renter) years in full-time education*